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Dexamethasone affect on the expression of bcl-2 and mTOR genes in T-lymphocytes from healthy donors

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Abstract

Synthetic glucocorticoids are able to activate apoptosis in the cells by regulating the transcription of the respective genes. Effect of dexamethasone on apoptosis is an established fact. However, its influence on another program of cell death autophagy, is currently unproven. Therefore, in this paper we have analyzed the influence of dexamethasone on the expression of bcl-2 and mTOR genes in T-lymphocytes from healthy donors. The results showed that dexamethasone reduced the expression of bcl-2 and mTOR genes. However, the nature of the effect of dexamethasone on mTOR and bcl-2 expression was different: the expression of bcl-2 gene in the long-term cultivation was maintained at the same reduced level, while the expression of mTOR was first reduced and then increased.

Keywords

Apoptosis, Autophagy, Bcl-2, Dexamethasone, MTOR, T-lymphocytes